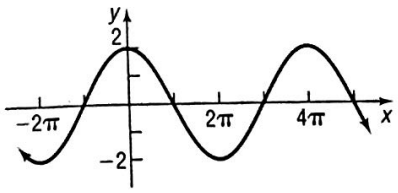
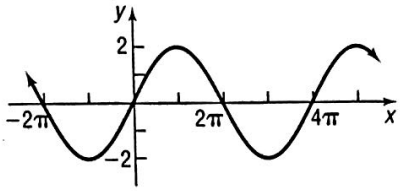
In Problems 19–28, determine the amplitude and period of each function without graphing.

19. $y = 2\sin x$
20. $y = 3\cos x$
21. $y = -4\cos(2x)$
22. $y = -\sin\left(\frac{1}{2}x\right)$
23. $y = 6\sin(\pi x)$
24. $y = -3\cos(3x)$
25. $y = -\frac{1}{2}\cos\left(\frac{3}{2}x\right)$
26. $y = \frac{4}{3}\sin\left(\frac{2}{3}x\right)$
27. $y = \frac{5}{3}\sin\left(-\frac{2\pi}{3}x\right)$
28. $y = \frac{9}{5}\cos\left(-\frac{3\pi}{2}x\right)$

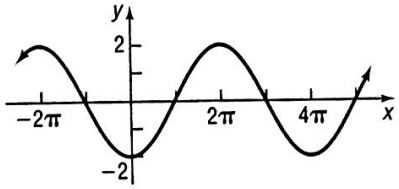
In Problems 29–38, match the given function to one of the graphs (A)–(J).



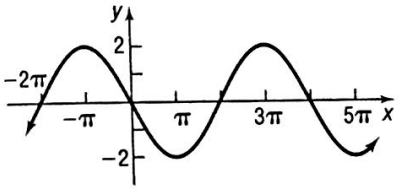
(A)



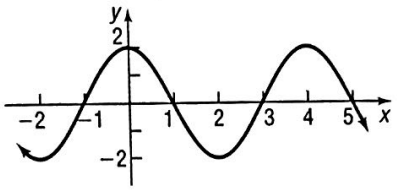
(B)



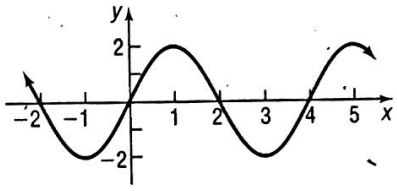
(C)



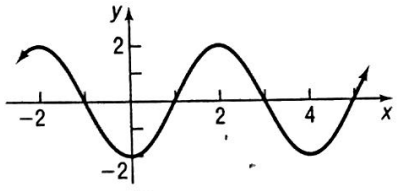
(D)



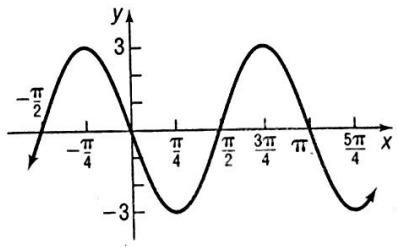
(E)



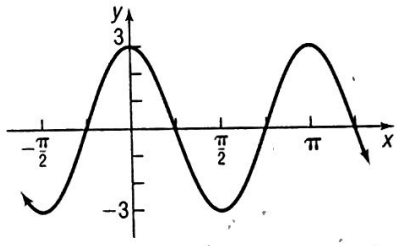
(F)



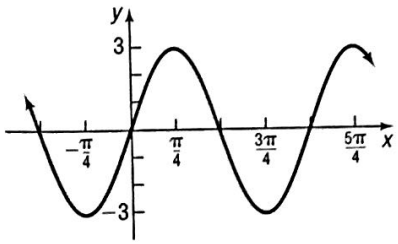
(G)



(H)



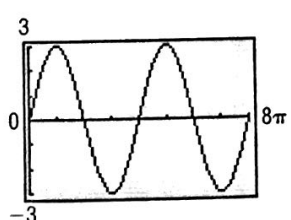
(I)



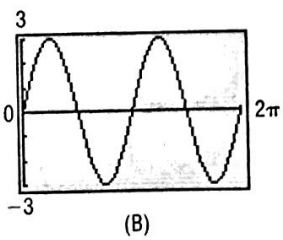
(J)

29. $y = 2\sin\left(\frac{\pi}{2}x\right)$
30. $y = 2\cos\left(\frac{\pi}{2}x\right)$
31. $y = 2\cos\left(\frac{1}{2}x\right)$
32. $y = 3\cos(2x)$
33. $y = -3\sin(2x)$
34. $y = 2\sin\left(\frac{1}{2}x\right)$
35. $y = -2\cos\left(\frac{1}{2}x\right)$
36. $y = -2\cos\left(\frac{\pi}{2}x\right)$
37. $y = 3\sin(2x)$
38. $y = -2\sin\left(\frac{1}{2}x\right)$

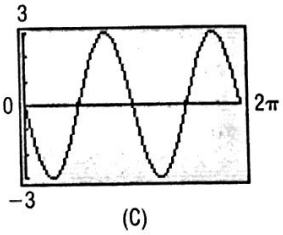
In Problems 39–42, match the given function to one of the graphs (A)–(D).



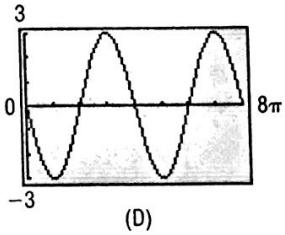
(A)



(B)



(C)



(D)

39. $y = 3\sin\left(\frac{1}{2}x\right)$
40. $y = -3\sin(2x)$
41. $y = 3\sin(2x)$
42. $y = -3\sin\left(\frac{1}{2}x\right)$